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2015 is a critical year for humanity

Written by [17 world-leading scientists](#), the Earth Statement clarifies, in eight essential elements, what the international climate agreement in Paris in December should achieve in order to provide the world with a good chance of avoiding dangerous climate change.

The first essential element is a commitment to limit global warming to below 2° Celsius, requiring a transition to a zero-carbon society by 2050.

The Earth Statement launch on Earth Day, April 22 2015, is an opportunity for all to join scientists' call for bold action by decision-makers to pave the way for an ambitious, equitable and science-based agreement in Paris.

The Year of Opportunity for a Sustainable Future

2015 is a critical year for humanity. Our civilization has never faced such existential risks as those associated with global warming, biodiversity erosion and resource depletion. Our societies have never had such an opportunity to advance prosperity and eradicate poverty. We have the choice to either finally embark on the journey towards sustainability or to stick to our current destructive "business-as-usual" pathway. Three times this year, world leaders will meet to set the course for decades to come. In July 2015, heads of state meet to discuss Financing for Development. In September 2015, the UN Sustainable Development Goals (SDGs) will be adopted. In December 2015, nations negotiate a new Global Climate Agreement. Decisions made in this single year will be the legacy of our generation. In particular, if we do not succeed in tackling climate change, the sustainable development goals, livelihoods in many parts of the world and the wellbeing of our close and distant kin will be threatened.

In 2015, **a good climate future** is still within reach. If we act boldly, we can safeguard human development. It is a moral obligation, and in our self-interest, to achieve **deep decarbonization of the global economy via equitable effort sharing**. This requires reaching a **zero-carbon society by mid-century or shortly thereafter**, thereby **limiting global warming to below 2°C** as agreed by all nations in 2010. This trajectory is not one of economic pain, but of **economic opportunity**, progress and inclusiveness. It is a chance too good to be missed. We have just embarked upon a journey of innovation, which can create a new generation of jobs and industries, whilst enhancing the resilience of communities and people around the world.

Avoiding Earth Tipping Points

We can still avert dangerous climate change. However, we are currently on a warming trajectory that will leave our world irrevocably changed, far exceeding the 2°C mark. This gamble could propel us into completely uncharted waters, with unmanageable sea-level rise and a vastly different climate, including devastating heat waves, persistent droughts and unprecedented floods. The foundations of our societies, including food security, infrastructure, ecosystem integrity and human health, would be in jeopardy, impacting most immediately the poor and vulnerable.

The latest science indicates that there are critical thresholds in the Earth system. Transgressing them may lead to dramatic and irreversible environmental changes. We are probably edging very close to such thresholds and may already have crossed one with regards to melting of parts of Antarctica. Sea-level rise of more than one meter due to this event alone may be inevitable. Tipping points can also lead to feedbacks and self-amplified climate change, pushing warming far beyond current estimates. No dollar price tag could ever measure the resulting human suffering and loss of countries, cultures and ecosystems.

Crossing Civilization Tipping Points

A new global citizens' movement is heeding the scientific evidence, demanding immediate climate action. Societies across the world have given political leaders a mandate and a responsibility to act for a safe climate future now. Informed by scientific knowledge, inspired by economic assessments and guided by the moral imperative, **we call on world leaders to work towards the following eight essential elements of a Paris Agreement and associated set of actions and plans that would represent a global turning point in December 2015:**

Eight Essential Elements of Climate Action in Paris

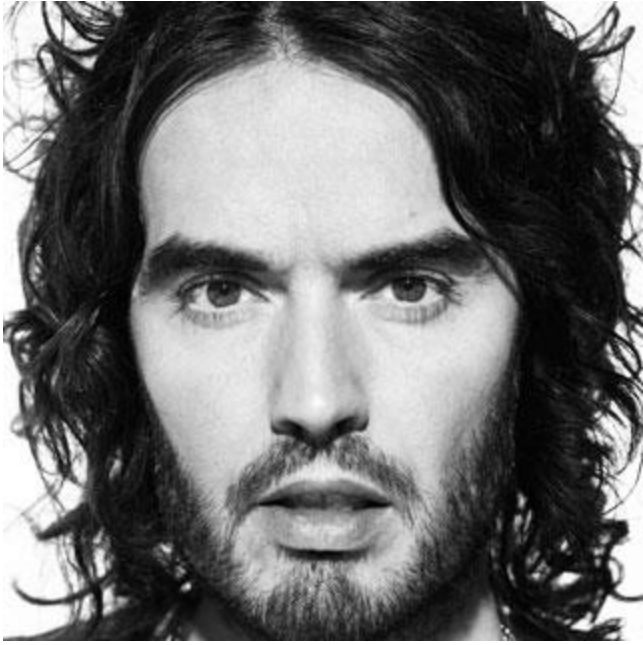
1. **Governments must put into practice their commitment to limit global warming to below 2°C. We should aim to stay as far below it as possible, since even 2°C warming will cause significant damage and disruption.** However, we are currently on a path to around 4°C warming by 2100, which would create unmanageable environmental challenges. If we do not act now, there is even a 1 in 10 risk of going beyond 6°C by 2100. We would surely not accept such a high risk of disaster in other realms of society. As a comparison, such a 1 in 10 probability is the equivalent of tolerating about 10,000 airplane crashes every day worldwide!
2. **The remaining global carbon budget – the limit of what we can still emit in the future – must be well below 1000 Gt CO₂ to have a reasonable chance to hold the 2°C line.** Humankind has already emitted around 2000 Gt CO₂ since the beginning of industrialization. Respecting the global carbon budget means leaving at least three quarters of all known fossil fuel reserves in the ground. With current emissions trends, the remaining 1000 Gt CO₂ would be used up within the next 25 years.
3. **We need to fundamentally transform the economy and adopt a global goal to phase out greenhouse gases completely by mid-century.** Deep decarbonization, starting immediately and leading to a zero-carbon society by 2050 or shortly thereafter, is key to future prosperity. This long-term goal, paired with strong national commitments, including a price on carbon, and a possibility to ramp up ambition via regular reviews, are essential elements of the Paris agreement. Fossil fuel subsidies should be removed urgently, and investment should be redirected to spark a global renewable energy revolution, warranting energy access for all and particularly for those most in need.
4. **Equity is critical for a successful global agreement in Paris. Every country must formulate an emissions pathway consistent with deep decarbonization.** For the sake of fairness, rich countries and progressive industries can and should take the lead and decarbonize well before mid-century. Developing countries should formulate plans far beyond what they can be expected to pursue on their own, reaping benefits from leapfrogging into a sustainable economy, well supported by international climate finance and technology access. Safeguarding the right to development of the Least Developed Countries (LDCs) is fundamental.
5. **We must unleash a wave of climate innovation for the global good, and enable universal access to the solutions we already have.** The unprecedented challenge of climate change requires unprecedented technological advances. We need targeted research, development, demonstration and diffusion (RDD&D) of low-carbon energy systems and sustainable land use, and capacity building to enhance access for those most in need. International cooperation, stringent laws and standards, public and private investments and clear economic incentives are all crucial steps in the global transition.
6. **We need a global strategy to reduce vulnerability, build resilience and deal with loss and damage of communities from climate impacts, including collective action and scaled-up support.** With 1°C of warming already having taken place, many societies are challenged by water scarcity, shifting rain patterns and other impacts. This poses a threat to human development in all countries, particularly among the poorest and most vulnerable. A 2°C or more warming of the planet would impose huge social and economic burdens that need to be shouldered through international solidarity.
7. **We must safeguard carbon sinks and vital ecosystems, which is as important for climate protection as the reduction of emissions.** Cutting down forests and degrading grasslands and aquatic systems is like killing our best allies in the fight against climate change. A precondition for sustainability is the strengthening, not the weakening of the resilience of natural and managed ecosystems and food production systems.
8. **We must urgently realize new scales and sources of climate finance for developing countries to enable our rapid transition to zero-carbon, climate-resilient societies.** This includes additional public funding for mitigation and adaptation at a level at least comparable to current global ODA (around 135 billion USD p.a.). Innovative schemes such as globally funded renewable energy feed-in tariffs are required. The private sector must be encouraged to mobilize substantially larger sums. Governments should engage with banks and pension funds, enabling a shift to climate-friendly investments. Global and national climate funding must be effective, transparent and accountable.



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